STRATEGIC MOBILITY, THE FORCE PROJECTION ARMY, AND THE OTTAWA LANDMINE TREATY: CAN THE ARMY GET THERE?

A Monograph

by

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Second Term AY 00-01

REPORT DOCUMENTATION PAGE

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (FROM - TO)
15-02-2001	monograph	01-01-2001 to 15-02-2001

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
STRATEGIC MOBILITY, THE FORCE PROJECTION ARMY, AND THE OTTAWA LANDMINE TREATY: CAN THE ARMY GET THERE? Unclassified	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S) Johnson, Scott C. ;	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME AND ADDRESS USA Command & General Staff College School of Advanced Military Studies 1 Reynolds Ave. Fort Leavenworth , KS 66027	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME AND ADDRESS ,	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

A

PUBLIC RELEASE

,

13. SUPPLEMENTARY NOTES

14. ABSTRACT

Current and emerging United States Army doctrine places great emphasis on the concepts of strategic responsiveness and force projection to meet the National Security Strategy requirements. The use or potential use, of landmines significantly increases the lethality of the Army force during deterrence and combat operations, and enhances survivability. In essence, with the use of landmines, the U.S. Army achieves an economy of force that in effect increases the U.S. Army?s agility, versatility and ability to deploy. Smaller more deployable Army forces such as the medium brigade and light units can generate more combat power by using the effects provided by landmines integrated with other combat systems. However, in order to use landmines worldwide, the U.S. must move, store, or reposition landmines in, through, or to the theater and area of operations prior to, concurrently, or in conjunction with the deploying Army force. Movement of forces, material, and equipment across international borders and into sovereign nations requires the permission of those nations, or a conscious decision to violate international laws and conventions regarding sovereignty. The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction ? also known as the Ottawa Landmine Treaty ? has the potential to place severe limits on the United States ability to deploy forces. The Ottawa Landmine Treaty (OLT) prohibits signatory countries from using, developing, producing, acquiring, stockpiling, or transferring anti-personnel landmines. As more countries sign and ratify the OLT, and create internal laws that enforce it, the number of countries that will allow a force that trains, plans, and intends to employ anti-personnel landmines as a matter of course to enter, pass through or over its sovereign territory has the potential to significantly decrease. The location, national strategy, and strategic alliances of non-signatory countries may or may not support a strategic deployment of a United States Army force. This may have a significant affect on the ability to project credible and lethal U.S. Army forces worldwide. This study examines the question: Does the Ottawa Landmine Treaty significantly affect the strategic responsiveness of the force projection Army? Beginning with a review and analysis of the treaty language, this study examines the United States policy on anti-personnel landmines and its origin, the concepts of force projection and strategic responsiveness, and two recent force projection operations involving United States Army forces. This review and assessment leads to two potential forms of the treaty in the future: status quo and restrictive. Analysis of the impact of the status quo and restrictive Ottawa Treaty scenarios on the seven attributes of the strategically responsive Army leads to the conclusion that the OLT has a moderate impact on the ability to project Army forces worldwide. There is, however, the potential for a significant impact on force projection at the regional and individual country level. The altruistic aims of individual countries appears to have greater affect on the ability to project force than either the status quo or restrictive Ottawa Treaty scenarios.

15. SUBJECT TERMS

Strategic Mobility; Force Projection; Ottawa Treaty; Landmine Treaty; Anti-personnel Landmines; Landmine Ban; Transit, Storage, and/or Access Rights; Pre-positioned Assets

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
					Burgess, Ed burgesse@leavenworth.army.mil
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified	Same as Report (SAR)	57	19b. TELEPHONE NUMBER International Area Code Area Code Telephone Number 913 758-3171 DSN 585-3171

ABSTRACT

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by Major Scott C. Johnson, U.S. Army, 54 pages.

Current and emerging United States Army doctrine places great emphasis on the concepts of strategic responsiveness and force projection to meet the National Security Strategy requirements. The use or potential use, of landmines significantly increases the lethality of the Army force during deterrence and combat operations, and enhances survivability. In essence, with the use of landmines, the U.S. Army achieves an economy of force that in effect increases the U.S. Army's agility, versatility and ability to deploy. Smaller more deployable Army forces such as the medium brigade and light units can generate more combat power by using the effects provided by landmines integrated with other combat systems.

However, in order to use landmines worldwide, the U.S. must move, store, or reposition landmines in, through, or to the theater and area of operations prior to, concurrently, or in conjunction with the deploying Army force. Movement of forces, material, and equipment across international borders and into sovereign nations requires the permission of those nations, or a conscious decision to violate international laws and conventions regarding sovereignty. The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction – also known as the Ottawa Landmine Treaty – has the potential to place severe limits on the United States ability to deploy forces.

The Ottawa Landmine Treaty (OLT) prohibits signatory countries from using, developing, producing, acquiring, stockpiling, or transferring anti-personnel landmines. As more countries sign and ratify the OLT, and create internal laws that enforce it, the number of countries that will allow a force that trains, plans, and intends to employ anti-personnel landmines as a matter of course to enter, pass through or over its sovereign territory has the potential to significantly decrease. The location, national strategy, and strategic alliances of non-signatory countries may or may not support a strategic deployment of a United States Army force. This may have a significant affect on the ability to project credible and lethal U.S. Army forces worldwide.

This study examines the question: Does the Ottawa Landmine Treaty significantly affect the strategic responsiveness of the force projection Army? Beginning with a review and analysis of the treaty language, this study examines the United States policy on anti-personnel landmines and its origin, the concepts of force projection and strategic responsiveness, and two recent force projection operations involving United States Army forces. This review and assessment leads to two potential forms of the treaty in the future: status quo and restrictive.

Analysis of the impact of the status quo and restrictive Ottawa Treaty scenarios on the seven attributes of the strategically responsive Army leads to the conclusion that the OLT has a moderate impact on the ability to project Army forces worldwide. There is, however, the potential for a significant impact on force projection at the regional and individual country level. The altruistic aims of individual countries appears to have greater affect on the ability to project force than either the status quo or restrictive Ottawa Treaty scenarios.

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CHAPTER ONE

INTRODUCTION

Current and emerging United States Army doctrine places great emphasis on the concepts of strategic responsiveness and force projection to meet the National Security Strategy requirements. Fighting and winning the nation's wars and deterrence are key components of the Army's ability to accomplish its mission. Deterrence with Army forces is possible through forward presence, forward deployment and prompt flexible response. In conflict, an option if deterrence fails, the Army must play its role to defeat the enemy, terminate the conflict under favorable conditions, and establish post-conflict stability.[1]

In order to accomplish deterrence and prosecute combat operations if deterrence fails, a strategically relevant Army force must be responsive, deployable, agile, versatile, lethal, survivable and sustainable.[2] Of these seven attributes, lethality – combat power – is arguably the capability that contributes the most to both deterrence and the ability to defeat the enemy once the Army force is deployed. The use or potential use of landmines significantly increases the lethality of the Army force during deterrence and combat operations, and enhances survivability.[3] With the use of landmines, the U.S. Army achieves an economy of force that in effect increases the U.S. Army's agility, versatility and ability to deploy.[4] Smaller more deployable Army forces such as the medium brigade and light units can generate relatively more combat power by using landmines integrated with other combat systems.

The current national policy on anti-personnel landmines (APL)[5] states that the U.S. Army can utilize its full inventory of self-destructing and self-deactivating landmine systems, and non-self-destructing (NSD) anti-tank mines.[6] However, in order to use landmines worldwide, the U.S. must move, store, or reposition landmines in, through, or to the theater

and area of operations prior to, concurrently, or in conjunction with the deploying Army force. Movement of forces, material, and equipment across international borders and into sovereign nations requires the permission of those nations, or a conscious decision to violate international laws and conventions regarding sovereignty.

The Department of State (DOS) coordinates transit rights, port access, and other host nation agreements with other countries for the Department of Defense and the combatant commanders.[7] Transit rights, both ground and air, and access to airports and seaports are critical to deploying a force projection Army's personnel, equipment, weapon systems and material. Existing international treaties and agreements play an important role in the ability of the Department of State to successfully obtain the necessary permissions in a timely manner. These same treaties and agreements have the potential to limit the strategic responsiveness of the deploying Army force.

The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction – also known as the Ottawa Landmine Treaty – has the potential to place severe limits on the United States ability to deploy fully mission capable forces. The Ottawa Landmine Treaty prohibits signatory countries from using, developing, producing, acquiring, stockpiling, or transferring anti-personnel landmines. Transfer, according to the treaty, involves the physical movement of anti-personnel landmines into or from national territory, and the transfer of title to and control over mines.[8] As of July 2000, 133 countries have signed and 107 have ratified or become parties to the Ottawa Landmine Treaty.[9] Additionally, thirty of the ratifying countries passed internal laws that provide for the enforcement of the treaty within their sovereign territory.[10]

As more countries sign and ratify the Ottawa Landmine Treaty, and create internal national laws that enforce it, the number of countries that will allow a force that trains, plans, and intends to employ anti-personnel landmines as a matter of course to enter, pass through

or over its sovereign territory has the potential to significantly decrease. The location, national strategy, and strategic alliances of non-signatory countries may or may not support a strategic deployment of a United States Army force. This may have a significant affect on the ability to project credible and lethal U.S. Army forces worldwide. This study examines the question: Does the Ottawa Landmine Treaty significantly affect the strategic responsiveness of the force projection Army?

THE OTTAWA TREATY

In 1991, the Vietnam Veterans of America Foundation and Medico International established the International Committee to Ban Landmines (ICBL).[11] This marked the beginning of the international movement by non-governmental organizations and sovereign nations to ban the use of anti-personnel landmines. Six years of international lobbying, debate, and negotiations culminated on 18 September 1997. On that date the ninety countries participating in the Ottawa Process – a Canadian led effort to ban anti-personnel landmines – accepted the final treaty text of what has become known as the Ottawa Treaty that entered into force on 01 March 1999.[12]

Thirty-five of the countries participating in the Ottawa Process formally signed the Ottawa Treaty in December 1997. Since then, the number of signatory nations has risen to 139 while the number of ratifications and accessions has reached 107.[13] These numbers are significant since there are only 189 members of the United Nations[14] and 191 countries recognized by the United States as independent states.[15] While 70 percent of the world's nations have signed, and 53 percent have ratified or accessed[16] the Ottawa Treaty, a regional review of the signatory status of nations provides a greater appreciation of the potential impact. In the Americas 33 of 35 nations, in Europe 37 of 44 nations, in Africa 43 of 53

nations, in Oceania 11 of 14 nations, and in Asia 15 of 45 nations have signed, ratified, or accessed the treaty.[17]

The list of countries that have not signed the Ottawa Treaty[18] includes the United States and a few of its allies and partners in regional stability initiatives. Within the North Atlantic Treaty Organization, only the United States and Turkey are non-signatory nations. In the Middle East and Southwest Asia, non-signatory nations include Israel, Saudi Arabia, Egypt, Kuwait, Bahrain, and the United Arab Emirates. In Asia, non-signatory countries include the Republic of Korea and Taiwan. The list of non-signatory countries also includes twenty-four nations with which the United States has some type of formal Status of Forces Agreement including Russia and Iran.[19] The twenty-one remaining nations on the non-signatory list includes a variety of nations of concern, former enemies, and countries opposed to United States presence within their sphere of influence - China, Cuba, Iraq, India, Pakistan, the Democratic People's Republic of Korea, Vietnam, and Yugoslavia (Serbia and Montenegro) to name a few.

An initial review of the signatory status of the countries of the world leads to the conclusion that the United States signatory status is not in line with the majority of our allies. At first glance, the United States signatory status actually appears more in line with the national policies of potential adversaries and countries the United States considers nations of concern. A closer look reveals that allies of the United States that are facing more immediate regional threats are also not signatory members of the Ottawa Treaty. The apparent disparity between the United States' anti-personnel landmine policy and that of many of its less threatened allies can be found by examining the factors that led to the United States' anti-personnel landmine policy, and the language and definitions found in the Ottawa Treaty itself.

TREATY LANGUAGE

According to most analysts, the Ottawa Treaty's twenty-two articles and general obligations are unambiguous. Many consider the articles in the treaty a model of simplicity when compared to other multilateral arms control treaties.[20] In Article 1 of the treaty, signatory nations agree to destroy or ensure the destruction of anti-personnel mines, and are prohibited from using, developing, producing, acquiring, stockpiling, or transferring anti-personnel landmines. The treaty language states that an anti-personnel is "a mine designed to be exploded by the presence, proximity, or contact of a person and will incapacitate, injure or kill one or more persons."[21]

The prohibitions listed in the treaty appear to be straightforward. The first prohibition declares "each state party undertakes never under any circumstances to use anti-personnel mines.[22]" While the meaning of this prohibition appears unambiguous, Australia felt it necessary to clarify their understanding of the term "use" before signing since the language of the treaty does not define it. Australia declared upon signing that the term "use" means the actual physical emplacement of anti-personnel mines and does not include any indirect or incidental benefit from anti-personnel mines laid by another state or person.[23]

The second prohibition stipulates "each state party undertakes never under any circumstances to develop, produce, otherwise acquire, stockpile, retain, or transfer to anyone, directly or indirectly, anti-personnel mines.[24]" However, a provision in Article 3 of the treaty allows state parties to retain or obtain anti-personnel mines for training purposes and transfer them for the purpose of destruction. With the exception of the term "transfer," the treaty language does not define any of the terms that describe the actions of the state parties. Interestingly, none of the state parties declared or provided clarification of their understanding of these terms upon signing the treaty.

The third and final prohibition states “each state party undertakes never under any circumstances to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a state party under this Convention.[25]”Here again, the terms that describe the actions of the state parties are undefined. Several nations felt it necessary clarify their own understanding of the terms assist, encourage, and induce.[26] Specifically, Great Britain, Australia, Czech Republic, and Canada have declared that participation in military operations with non-signatory countries does not violate the induce, encourage or assist prohibitions.

While the prohibitions appear straight forward, the lack of clear definitions of the prohibited actions for all but “transfer” allow for some interpretation by the state parties. According to the treaty, “transfer involves, in addition to the physical movement of mines into and from national territory, the transfer of title to and control over mines, but does not involve the transfer of territory containing emplaced anti-personnel mines.[27]” Even this definition when taken in context of the treaty, allows for some interpretation. Article 2 of the treaty states “transfer to anyone,” rather than just transfer. While the framers of the treaty may have wanted to prohibit state parties from allowing non-state parties from moving anti-personnel under the non-state party’s control through a state party’s national territory, the language and definition is ambiguous enough to allow for some liberal interpretation.

According to the IBCL, the United States is pressuring state parties to narrowly define the word "transfer" so that it does not include the transit of anti-personnel mines through a state party’s territory. The IBCL also believes that by allowing transit, state parties assist with an action prohibited by the treaty and has called for the President of the United States to end the lobbying efforts to narrowly define transfer.[28] A similar situation exists with storage of anti-personnel landmines by non-state party countries in signatory countries.[29] The IBCL petitioned the Mine Ban Treaty's Standing Committee of Experts (SCE) to take up the definition issue during its May 2000 meeting.[30]

While the battle over definitions within the treaty continues, it may have little relevance without the full support of the participating state parties. Since the Ottawa Treaty lacks extensive implementation, verification, and compliance components found in other major treaties, the strong commitment of the convention supporters and state parties is vital to implementation.[31] While there are no stated penalties for non-compliance within the treaty, the efforts of non-governmental organizations such as the IBCL, and the popular support for the move to ban anti-personnel landmines worldwide provides ample impetus for signatory nations to comply. The same facts that led to the movement for an international anti-personnel landmine ban bolster the movement to ensure compliance.

Worldwide estimates of the number of active landmines in the ground exceed 100 million. Most of these are in seventy of the poorest countries in the world and are non-self-destructing mines that remain active in the ground long after hostilities cease. From a humanitarian perspective, the significant factor is the number of human casualties each year. According to most studies, anti-personnel landmines kill or injure up to 26,000 people each year.[32] These numbers were instrumental in generating the popular altruistic support for the landmine ban movement, and are a catalyst for the movement to enact laws enforcing the Ottawa Treaty in signatory nations.

Since the treaty lacks extensive verification, implementation, and compliance components, enforcement of the treaty prohibitions requires state parties to enact national legal, administrative, and other measures to prevent and punish prohibited activity by persons or on territory under its control. These types of measures make the treaty legally binding.[33] The *Landmine Monitor Report 2000* list thirty countries in which legislation has been enacted or exists to implement the landmine ban, and an additional 10 countries were such legislation is being prepared.[34] Even with such internal controls, state parties must enforce the legal code in order to remain in compliance with the treaty.[35]

In summary, the seemingly unambiguous Ottawa Treaty is neither understood nor interpreted by both signatory and non-signatory nations in the same way. Implementation, verification, and compliance require the full support of the signatory country to include enacting and enforcing national measures to make the treaty legally binding. Finally, the lack adequate definitions of prohibited actions of signatory nations allows for interpretation that may enable state parties to intentionally or unintentionally circumvent what the treaty is designed to prevent.

From the standpoint of the United States, the shortfalls identified in the treaty may provide an ability to continue to store and transit anti-personnel landmines in and through Ottawa Treaty signatory countries. However, as the definition of prohibited actions become more refined, and laws are enacted and enforced in signatory countries to implement the treaty -- as many believe it is intended, the United States may find it more and more difficult to find signatory countries that will allow anti-personnel landmine storage and transit by non-signatory countries. The United States' attempts to obtain storage and transit rights in signatory countries can be directly linked the current United States policy on anti-personnel landmines and the factors that led the United States belief that it must retain the right to use anti-personnel landmines.

THE U.S. POLICY ON ANTI-PERSONNEL LANDMINES

The United States government was active in the Ottawa Treaty process and appeared to support the movement to ban anti-personnel landmines from its inception. Active participation, however, ended in September 1998 when the United States withdrew from the process citing concerns over the security of the Korean peninsula in the absence of anti-personnel landmines, and that the definition of anti-personnel landmines in the treaty would effectively eliminate the use of munitions containing self-destructing anti-personnel

landmines.[36] The United States maintained the position that self-destructing anti-personnel landmines did not contribute to the global anti-personnel landmine problem and should not be included in the ban.[37] Since the announcement of the first policy in 1996, the defense of Korea and the ability to use self-destructing landmine systems remain fundamental to the United States anti-personnel landmine policy.

President Clinton announced the first United States policy on anti-personnel mines on 16 May 1996 in the form of Presidential Decision Directive 48 (PDD-48). Additional Presidential Decision Directives (PDD-54 and PDD-64) in 1997 and 1998 attempted to clarify and fully articulate the United States anti-personnel landmine policy. Together these three PPDs make up the current United States anti-personnel landmine policy. Presidential Decision Directive 48 unilaterally eliminated the use of all non-self-destructing anti-personnel landmines unless specifically used for counter-mine or de-mining training, or on the Korean peninsula, and halted all anti-personnel landmine employment training for soldiers unless they were deploying to Korea. The second directive (PPD-54) capped United States stockpiles of anti-personnel landmines at current levels, banned anti-personnel landmine exports and transfers, and stipulated that the United States would double its efforts to negotiate a global anti-personnel landmine ban. Additionally, PPD-54 directed the demilitarization of all non-self destructing anti-personnel landmine stocks not needed for training or defense by the end of 1999.[38]

The third directive (PDD - 64) called for the development of anti-personnel landmine alternatives in order to end the use of all anti-personnel landmines outside Korea by 2003, to end all use of anti-personnel landmines in Korea by 2006, and to continue the use of self-destructing / self-deactivating anti-personnel landmines until 2003. This directive also stipulated that the United States would continue to use combination or “mixed” mine systems containing both self-destructing / self-deactivating anti-personnel (AP) and anti-tank (AT)

mines until suitable alternatives are developed. Finally, this directive stated that the United States intends to sign the Ottawa Treaty by 2006 if suitable alternatives are found.[39] The current United States National Security Strategy reiterates the major points of the PPDs, confirms that the United States intends to sign the Ottawa Treaty at some future point, and emphasizes that the United States retains the right to use self-destructing / self-deactivating mixed AP / AT munitions until suitable alternatives are identified and fielded.[40]

The continued emphasis on retaining the right to use self-destructing landmine munitions containing anti-personnel landmines is directly linked to the United States military's belief that the munitions provide an operational and tactical benefit to ground forces that cannot not be replaced or eliminated without technological advances that are currently unavailable.[41] Obviously, there has been great debate over the validity of this position. The International Committee of the Red Cross's study on this topic concluded that there is no documented proof that anti-personnel landmines are "indispensable weapons of high military value.[42]" This conclusion mirrors one expressed by a group of retired United States military general officers in an open letter to President Clinton published in the New York Times on 03 April 1996.[43]

In contrast, the Chairman of the Joint Chiefs of Staff, the service chiefs and the ten unified commander's in chief (CINC) sent a letter to the Chairman of the Senate Armed Services Committee in July 1997 emphasizing the operational and tactical benefits of self-destructing mixed anti-personnel / anti-tank minefields in mid to high intensity conflicts. Tactically, the letter indicated that the use of landmines enhanced the ability to shape the battlefield, protect unit flanks, and maximize the effects of other weapons systems. Operationally, the letter stated that landmines were particularly important to the protection of early entry forces and light forces during the initial stages of deployment.[44]

Numerous studies and research papers published since the Ottawa Treaty was signed support the position of the Joint Chiefs of Staff and CINCs.[45] These studies indicate that anti-personnel landmines provide both tactical and operational advantages to the United States ground forces when employed in conjunction with anti-tank mines. Operationally mixed AP / AT minefields enable and enhance the employment of combat power in an economy of force role during initial entry and early entry operations. Mines also enhance force protection, and maneuver by restricting or controlling enemy maneuver while retaining freedom of maneuver to achieve positional advantage. The most significant advantage attributed to the use of self-destructing landmines systems containing anti-personnel landmines was the flexibility they provide to operational commanders to employ the minimum force necessary to achieve the mission – economy of force. Tactically expressed as combat multiplier, self-destructing landmines systems containing anti-personnel landmines also increase the overall combat power of a force.[46]

The United States Army and Marine Corps currently have several types of self-destructing landmine systems that contain, or can create minefields that contain AT and AP mines. These include systems such as Volcano, Modular Pack Mine System (MOPMS), and artillery delivered munitions that are organic assets in separate maneuver brigades, cavalry regiments and divisions.[47] Compared to conventional non-self-destructing AT mines and command detonated Claymore mines, these systems require less logistics support and manpower, and are easier and faster to employ.

For example, 160 canisters of Volcano mines on a single vehicle with a crew two can create a 1,100 meter by 120 meter self-destructing AP / AT tactical minefield in less than one hour. A similar sized minefield created with conventional AT mines would require the movement of 1,000 mines, and take a platoon of combat engineers a minimum of 5 hours to emplace under ideal conditions. The conventional minefield would require the commitment

of forces to protect the minefield from ground infiltration or disarmament in order to for it to achieve the same effect as the self-destructing minefield containing anti-personnel landmines.

A similar difference in time and resources required for the emplacement of hasty protective minefields around unit locations is found when comparing the use of MOPMS and conventional AT mines. A unit can employ a MOPMS minefield in minutes with as little as three personnel versus the hours the same number of personnel would require to emplace a conventional hasty protective minefield. As an added benefit, the self-destructing minefields remove themselves from the battlefield once their self-destruct time expires. This provides an additional savings in resources that would be required to remove conventional mines.

While the resource and timesavings represented by the use self-destructing landmine systems is significant, there are other benefits to using them. Department of Defense funded studies indicate that there could be between a 22 to 33 percent increase in the number of casualties if mixed self-destructing landmine munitions were eliminated without an available alternative.[48] An increase in casualties of this magnitude would have ramifications from the strategic to tactical level in terms of the United States commitment to send forces to crisis areas, an increase in the required logistics and medical requirements, and the employment of forces on the ground. In order to minimize the projected number of friendly casualties and achieve the desired outcome, there would have to be an increase in both the number of combat and support assets.

Estimates indicate that 30 percent more capability would be required to make up for a decision not to employ munitions containing anti-personnel landmines. For an operational deployment that would normally require a United States Army corps with three divisions, this equates to a requirement for an additional division's worth of Army assets, and / or augmentation with joint force capabilities.[49] Both of which are solutions that require the

commitment of additional manpower, lift assets, and resources that exceed those required to deploy the organic self-destructing munitions containing anti-personnel landmines.

Based on the current United States policy on anti-personnel landmines, it appears the that the United States anti-personnel landmine policy is founded in the operational and tactical benefits gained by using integrated AP / AT landmine munitions in and where there is a potential for mid to high intensity conflicts. Of note, the same policy also indicates that as soon as viable alternatives to anti-personnel landmines become available the United States intends to eliminate the use and stockpile of self-destructing anti-personnel landmines. In the interim, the United States believes there is an operational need for, and retains the right to use self-destructing anti-personnel landmines in "mixed" minefields.

Presidential Decision Directive 64 indicates that the interim period could end as early as 2006 if viable and sufficient anti-personnel landmine alternatives are found and produced. Based on the current funding and program status, viable alternatives in sufficient quantities may not be available until 2010 or beyond.[50] Until alternatives become available, United States ground based forces are, in effect, tactically and operationally reliant on munitions containing self-destructing anti-personnel landmines. The reliance on anti-personnel landmines, in turn, provides the impetus to obtain transit and storage rights in Ottawa Treaty signatory countries. Since the current National Military Strategy foresees a military based in the continental United States with limited forward deployed forces, there is a mandate for rapid deployment of forces to defend national interests.[51] The United States Army accomplishes this through forward basing of units and equipment, and the ability to project forces and material via strategic mobility assets to crisis regions around the globe.

THE FORCE PROJECTION ARMY AND STRATEGIC MOBILITY

As stated in the introduction, current and emerging United States Army doctrine places great emphasis on the concepts of strategic responsiveness and force projection in order to fight and win the nation's wars and deter aggression. Strategically responsive Army forces are organized, trained, and equipped for global operations. The Army must be able to generate and sustain maximum combat power at the time and place the Joint Force Commanders (JFC) require. The Army is redesigning its force structure to achieve the strategic responsiveness called for in the National Military Strategy.[52]

The seven attributes of a strategically responsive force reflect the programmatic and operational requirements of the Army. According to the latest draft of *FM 3.0 Operations*, a strategically responsive force is responsive, deployable, agile, versatile, lethal, survivable and sustainable.[53] Responsiveness is the capability that establishes the conditions for operational and tactical maneuver at the outset of operations. It includes stationing, movement and positioning of units, resources, and equipment, and training of the force. More then just quickly deploying Army forces, responsiveness "requires that the right Army forces deploy to the right place at the right time.[54]" Responsiveness is founded in the Army's forward deployment of units, forward positioning of capabilities, peacetime engagement, and the ability to project the force from the United States, between theaters, and within a theater.

Commanders also train a responsive force to accomplish the assigned task or mission. Since Army forces must be prepared for the full spectrum of conflict, this training includes the use of mixed munitions containing self-destructing anti-personnel mines. From the maneuver company to the Corps, the integration of fires and effects with self-destructing minefields containing mixed munitions is vital to effective employment.[55] Considering the United States policy on anti-personnel mines and the implied operational and tactical

requirement for their use, Army forces not only train to use self-destructing landmines, but have an inherent operational and tactical reliance on them when deploying to a mid to high intensity crisis. Obviously, the training of responsive forces includes much more than just employing mines. Army forces train to be capable of accomplishing missions across the full spectrum of conflict. These same forces must also plan, prepare and train on the tasks associated with deploying a force from its home station.

According to *FM 3.0 Operations,* "Army forces combine training, facilities, soldiers, and equipment to deploy with speed and force." Commanders ensure Army forces are deployable by visualizing, planning, training, and rehearsing the process that projects a fully operational unit into a theater. Nested in preparing deployable forces is the concept of force packaging for different threat or crisis scenarios.[56] In other words, Army forces are not only prepared to conduct the missions they receive in theater, they are prepared to deploy in rapidly formed tailored force packages globally in a sequence that supports the JFC's requirements. The development of force packages is the essence of the agile attribute.

In terms of the strategically responsive Army force, agility requires "force packages to include sufficient mobility and sustainment to accomplish the mission.[57]" Commander's balance lift limitations, assigned and anticipated tasks, and support requirements in order to design a force package that is capable of achieving its mission based on the situation. The ability to plan for the utilization of self-destructing mixed landmine munitions in or where there is a potential for an escalation to mid to high intensity scenarios significantly increases the innovation a commander can use to design force packages. Self-destructing landmine munitions provide flexibility by allowing the commander to employ an economy of force during initial and early entry operations. These munitions also enhance force protection, and allow the commander to retain freedom of maneuver while denying it to the enemy. The

flexibility provided by the employment of landmines contributes to the versatility of the strategically responsive Army force.

Commanders achieve versatility by designing adaptive packages of Army forces that have the necessary structure to reorganize and adapt to changing missions.[58] The ability to employ self-destructing mix landmine munitions provides a maneuver commander with the flexibility to transition from stability operations to mid or high intensity operations without significant increases in resources or force structure. The capability to employ self-destructing mixed landmine munitions increases the versatility of a force by enhancing the relative combat power with minimal increases in force structure. The increase in combat power contributes to the lethality of the strategically responsive force.

Lethality is synonymous with the use of combat power to dissolve the enemy's will. Commanders ensure lethality by deploying Army forces with enough combat power in concert with the joint force capabilities to overwhelm any likely enemy. The elements of combat power are maneuver, firepower, leadership, protection and information.[59] The ability to use self-destructing mixed landmine munitions enhances maneuver, firepower, and protection. As mentioned previously, landmines deny the enemy the ability to maneuver while retaining friendly freedom of maneuver, and enhance force protection. In the defense, landmines used in conjunction with fires are a combat multiplier that fix enemy forces and allows other weapons to increase their efficiency.[60] The ability to destroy the enemy and retaliate are lethality's contribution to survivability.[61]

Survivability maximizes the protection of Army forces by combining technology with tactics, techniques, and procedures. The integration of force protection assets such as engineer, air defense and chemical units increases the survivability of deployed forces.[62] The use or ability to use self-destructing mixed landmine munitions enhances force protection by providing early warning and preventing the infiltration of deployed unit assembly and staging

areas, logistics nodes, and command and control centers. While fences and other barriers may provide some benefits, there is no substitute for the deterrent effect of anti-personnel landmines.[63] The protection of deployed logistics assets is especially critical to ensuring strategically responsive Army forces are sustainable.

Sustainable Army forces deploy with sufficient combat service support units to maintain the force, however, in order to balance conflicting demands for strategic lift assets, JFC's attempt to minimize the logistics footprint.[64] This balancing of combat service support structure and sustainment requirements leads to smaller, fewer, and, therefore, more critical logistics nodes. While landmines do not have a direct impact on sustainment of the force, the effect of using or having the ability to use landmines contributes to the ability to sustain the force. The benefits of using, or having the potential to use landmines enhances an Army force's responsiveness, versatility, agility, lethality, and survivability, and enables the ability to protect and reduce the logistics footprint.

Without self-destructing mixed landmine munitions, larger less responsive and deployable Army forces would be required to achieve the same versatility, agility, lethality and survivability of a force that has the ability to employ self-destructing mixed landmine munitions. A larger force would also require a larger logistics footprint. There is also the potential for increased casualties if self-destructing mixed landmine munitions were not available to the Army force. This, too, would invariably increase the logistics footprint of the Army force and affect the sustainability of the Army force and its ability to project power globally.

FORCE PROJECTION

Force projection is the military component of power projection and imbedded within the responsive attribute of a strategically responsive Army force. It encompasses the

processes of mobilization, deployment, employment, sustainment and redeployment.[65] The ability to move forces and/or material to and from a port of origin to an area of operations is the essence of deployment and sustainment. Redeployment is the process of re-positioning forces in the same theater, transferring forces and material to support another JFC's operational requirements, or returning those assets to their origin for demobilization.[66] Mobilization is the process of assembling forces and material, and preparing them for war or other national emergencies[67], while employment is the use of forces in an area of operations in support of the JFC.[68]

The 1998 Army Posture Statement states that strategic mobility is the key to the Army's ability to project power,[69] and that theme continues to remain relevant in the 2001 Army Posture Statement.[70] Strategic mobility is "the capability to deploy and sustain military forces worldwide in support of national strategy,[71]"and plays a fundamental role in the deployment, sustainment and redeployment processes, and impacts the processes of mobilization and employment directly and indirectly. According to *JP 3-35 Joint Deployment and Redeployment Operations*, rapid force projection with strategic mobility is key to the United States National Military Strategy.[72]

The speed and timeliness of the any United States response is a function of global mobility, inter-theater lift, and overseas presence. The combination of rapid lift and pre-positioned assets provide the JFC with flexible mobility options. Deployment and redeployment options normally involve land, sea and air movement augmented with pre-positioned assets. Successful power projection operations depend on the availability of sufficient mobility assets to deploy, sustain, reconstitute, and re-deploy combat forces.[73]

The United States Transportation Command's component commands (Air Mobility Command, Military Sealift Command, and Military Traffic Management Command) exercise operational control over the strategic mobility triad of common user airlift, sealift, and pre-

positioned force, equipment and supplies. To accelerate deployment pre-positioned equipment and supplies for combat and logistics units are stored aboard ships or in easily accessible storage facilities ashore. In addition to the strategic use of roads, rails and in-land waterways if the situation permits, the internal theater airlift assets of a JFC may augment the strategic mobility triad.[74]

Regardless of which strategic mobility asset is used, the movement of units, material and equipment across international borders and into sovereign nations requires the permission of each individual foreign nation involved, or a conscious decision to violate a nation's sovereignty. Forward positioning of assets in a combatant commander's area of responsibility and on the sovereign territory of a foreign nation requires similar permissions. The ability to obtain air and ground transit rights, and access to airports and seaports is a fundamental requirement for deploying the strategically responsive Army. The Department of State coordinates transit rights, port access, and other host nation agreements with other nations for the Department of Defense and the supported commander.[75]

The Department of State facilitates access and pre-positioning requirements, and analyzes provisions for access and basing. The Bureau of Political-Military Affairs in coordination with the Department of Defense and the American Embassies worldwide negotiate the required permissions, treaties, or agreements that allow access and the forward positioning of military assets in a foreign country.[76] As the personal representative of the President of the United States, the ambassador, supported by the Department of State and the members of the embassy's country team, work together to meet the needs of the supported combatant commander. Request for transit and access are normally coordinated through the embassy's United States Defense Representative – the representative of the Secretary of Defense and the geographic combatant commander – or the service component member of the Defense Attaché or Security Assistance Office.[77] Joint doctrine does not specify the

actual mechanism that geographic combat commanders use to obtain diplomatic clearances for access, storage and transit. In the United States European Command, the service components are responsible for obtaining diplomatic clearances and providing transit notification for movements that cross international borders in accordance with negotiated agreements and international law.[78]

Even when treaties that provide for port access, and transit and storage rights exist, the foreign policy and security concerns of sovereign nations can affect the ability to obtain the necessary permissions. France, for example, denied the United States the right to over fly their airspace during the bombing of Libya in 1986.[79] This one example demonstrates that another nation's foreign policy can affect the United States' ability to obtain transit rights during the conduct of military operations. Considering the relationship between the United States and many of the nations that have not signed the Ottawa Treaty and their relative locations in the world, it is a straightforward assumption that it may not be possible to rely solely on non-signatory nations for transit and storage rights in order to project the force worldwide..

The altruistic environmental or social aims of nations can also affect the United States ability to obtain access permissions required to support power projection. New Zealand's anti-nuclear stance resulted in the denial of port access to United States naval ships beginning in 1985. Subsequent enactment of nuclear free legislation in 1987 effectively stopped port calls in New Zealand by the United States Navy.[80] The altruistic aims of nations, however, have not always prevented the United States from obtaining permissions to access ports or obtain storage rights.

During the Cold War, the United States, in spite of Japan's nuclear ban, stored nuclear weapons in or near Japan's sovereign territory. Additionally, United States military vessels transited and accessed ports throughout Japan while carrying nuclear weapons. These

transgressions were accomplished under the auspices of the United States "Neither Confirm or Deny" nuclear weapons policy, and Japan's political leadership's private pro-nuclear disposition and quiet acquiescence. While this policy allowed the United States access, the fact the public outcries against the policy placed on great strain on the Japanese government and Japanese-American relations.[81]

The Ottawa Treaty has altruistic aims similar to the various anti-nuclear movements that were active during the Cold War. The United States' ability to obtain the necessary permissions for access, transit, and storage may depend on more than the signature, ratification, accession, and legislative status of signatory countries, or the interpretation of the language of Ottawa Treaty. It may depend on a nation's internal political situation and dedication to the altruistic goal of the landmine ban even if other treaties and agreements with the United States exist. For example, the United States European Command has agreements that allow for the storage of munitions to include self-destructing anti-personnel mines in Germany, Greece, Italy, Norway, Spain, and Turkey.[82] Similar agreements coordinated for United States Central and Pacific Commands provide for storage of munitions including self-destructing anti-personnel mines in Saudi Arabia, Diego Garcia[83], the Republic of Korea and Japan.[84] With the exception of Turkey, Saudi Arabia, and South Korea, all of these nations have signed the Ottawa Treaty. Legal, ethical, and moral forces at work in these countries could result in the denial of continued storage rights or an inability to move the landmines from the storage sites to sea or air ports, or out of the country along roads, rail, or waterways.

In contrast to the pre-positioned ashore assets mentioned above, there is no need for storage rights for pre-positioned afloat assets. The ships containing combat and sustainment packages, however, may port outside the United States for re-supply and repair, and may contain self-destructing anti-personnel landmines.[85] Ottawa Treaty signatory countries may

deny port access to these ships, or the ability to move the equipment or supplies through their sovereign territory once the equipment is unloaded if anti-personnel landmines are present.

The United States government's attempts to urge Ottawa Treaty signatory countries to liberally interpret the language of the treaty to allow for transit, port access, and storage rights indicates that these permissions are central to executing force projection with the strategic mobility triad. Delays in obtaining transit rights and access to ports can adversely affect force flow[86] and force closure.[87] Failure to obtain the needed transit and access rights can not only cause the rerouting of strategic mobility assets and diversion of operational assets within a theater or combatant commander's area of responsibility, it could result in mobilizing Army forces being told not to deploy with self-destructing anti-personnel landmines. A review of recent force projection operations may provide some insights into the impact of foreign policy, internal politics, and treaties on a strategically responsive United States Army.

Chapter 2

FORCE PROJECTION IN AN OTTAWA TREATY WORLD

From November 1998 to February 2000, the United States projected Army forces to a variety of locations around the world to include Indonesia, the Balkans, and Southwest Asia. While none of these deployments resulted in the commitment of Army forces to combat operations or the employment of self-destructing landmine systems, the mission of the Army forces deployed to the Albania during Operation Allied Force and to Kuwait during Operation Desert Fox had the potential for Army forces to be involved in mid to high intensity conflict.[88] Since the strategic mobility triad was used during these force projection operations and there was a potential for ground combat operations, reviewing the deployments of Army forces to Albania and Kuwait may provide insights into the potential impact of foreign policy, internal politics, and treaties on the United States ability to project Army fully mission capable forces globally.

OPERATION DESERT FOX

In November 1998, the United States and its allies conducted four days of bombing operations in response to Iraq's failure to comply with United Nations resolutions. The United States Army contribution to the effort included two mechanized battalion task forces and an aviation task force that were training with Kuwaiti forces when the crisis that led to the bombing erupted. The Army quickly deployed additional elements of a combat ready brigade to Kuwait to reinforce the in-place force using both strategic airlift and pre-positioned assets from the strategic mobility triad. The majority of the airlifted forces were soldiers destined to draw pre-positioned equipment stored in Kuwait and resources pre-positioned in Diego Garcia.[89]

Under control of Combined/Joint Task Force--Kuwait, the ground forces played a major role in deterring Iraq from using the air strikes as an excuse to move against Kuwait. The United States contribution to the ground force was essentially a maneuver brigade. The deterrence capability of the United States Army brigade was founded in its agility, lethality, and survivability.[90] While not specifically stated, the cumulative deterrent effect was enhanced by the potential use of self-destructing landmine systems from the stockpiles of self-destructing landmine systems located in Saudi Arabia and Diego Garcia. Since this Southwest Asia deployment occurred before the Ottawa Treaty entered into force, it is not difficult to determine that the Ottawa Treaty had little to no impact on the deployment.

The Ottawa Treaty, however, may have an impact on future deployments to Southwest Asia. The IBCL is directing lobbying efforts at denying the United States the ability to use pre-positioned anti-personnel landmine stocks in signatory countries, and transiting signatory countries with anti-personnel landmines.[91] An obvious extension of this lobbying effort would be to prevent the deployment of troops of a third party non-signatory nation destined to employ anti-personnel landmines.

If the ability to obtain transit rights and retain storage rights for self-destructing landmine systems in signatory countries becomes untenable, the pre-positioned assets on the Great Britain's territory of Diego Garcia and the ability to move soldiers and equipment through air bases in Europe could be in jeopardy. Moving the pre-positioned equipment and resources to another location in the Middle East and re-routing aircraft carrying soldiers and equipment from the United States can mitigate these potential threats to the ability to conduct force projection.

At first glance, these options appear viable primarily because the majority of the countries in the Middle East region did not sign the Ottawa Treaty. A similar situation exists in Asia. The ability to stockpile munitions containing anti-personnel landmines in Japan

could be in jeopardy. However, relocating these resources may be feasible given the number of non-signatory countries in the region and United States' processions in the Pacific.

TASK FORCE HAWK

The Ottawa Treaty's impact on the strategic responsiveness of the United State Army is more apparent in the deployment of Army forces to Albania. As the Ottawa treaty entered into force in March 1999, the Commander in Chief, United States European Command, was directing the deployment of a United States Army task force of attack aviation and field artillery units capable of conducting deep attacks in support of operations against the Former Republic of Yugoslavia (FRY) during Operation Allied Force. Originally directed to deploy to the Former Yugoslav Republic of Macedonia (FYROM), the deployment location for the United States Army element, known as Task Force Hawk, changed to Albania during mobilization. The change from FYROM to Albania was a result the United States' inability to obtain the necessary clearances from the FYROM government rather than operational employment considerations.[92] For its own security reasons the FYROM government did not support the basing of United States Army forces that would be engaged in direct attacks against FRY from its sovereign territory.

Albania, on the other hand, did not have the same reservations. Due to the relative closeness of the FRY border and uncertainty within the Albanian borders, commensurate with deep attack mission accomplishment, protection of the United States Army forces was the highest priority. The bulk of the mission requirements for force protection were the responsibility of a ground maneuver brigade built around a brigade headquarters, a mechanized infantry battalion task force and an airborne infantry battalion task force.

The ground maneuver brigade's missions included the conduct of offensive and defensive operations to defeat enemy attacks against the task force assembly area, and

security for the Task Force assembly area and the artillery team located in a forward operating base.[93] Based on the mission, United States Army doctrine and the nation's policy on anti-personnel mines, the maneuver brigade should have and did deploy with self-destructing landmine systems containing anti-personnel landmines in order to ensure mission accomplishment.[94] Fortunately, the situation in Albania never escalated to the point where the employment of self-destructing landmines was operationally or tactically necessary.[95]

The maneuver brigade deployed with systems containing anti-personnel mines in spite of the fact that Albania signed the Ottawa Treaty on 08 September 1998. The signatory status of Albania did not mean that Albania was bound to the terms of the treaty although it is highly encouraged by the ICBL.[96] Of even greater interest, was the fact that almost all the elements of Task Force Hawk deployed to Albania by air from Germany.[97] The most direct air routes from air bases in Germany to Albania cross over one or more of the following signatory countries: Austria, France, Switzerland, the Czech Republic and Italy.

Unless the strategic and operational air mobility assets that would have carried the self-destructing anti-personnel landmine systems flew north out of Germany into the North Sea and remained over international waters until reaching Albania, it is highly likely that any landmine systems and munitions containing anti-personnel landmines flew over signatory or ratifying members of the Ottawa Treaty. There is little doubt that the assets flew or shipped out of an Ottawa Treaty country. Germany signed the Ottawa Treaty on 03 December 1997, ratified it on 23 July 1998[98], but does not consider storage or transit by a third party to be in violation of the Ottawa Treaty.[99] The policy of the other Ottawa Treaty nations potentially involved in the transit of the United States Army self-destructing landmines systems across their sovereign territory are less obvious. It can be inferred that these nations would have approved the transit, been unaware of the transit, or acted in accordance with a variation of

the “neither confirm, nor deny” policy similar to the one that existed during the Cold War with Japan since no public outcry or diplomatic statements to the contrary were made.

Regardless of the position of these nations, the deployment of Task Force Hawk provides two relevant items of interest concerning the potential impact of national policies and treaties on strategic mobility and force projection. First, FYROM’s failure to approve the deployment of United States combat forces reiterates that impact that a nation’s foreign policy, national security concerns, and internal politics can have on force projection and strategic mobility. Second, the Ottawa Treaty appeared to have little impact on the projection of force within or from Europe during an operational deployment with the potential for mid to high intensity conflict. The ability to of United States Army to conduct similar force projection operations into and out of Europe in the future with ground, sea, or air assets of the strategic mobility triad, however, should not be taken for granted.

PORTENTS FOR THE FUTURE

In addition to the potential effects of IBCL lobbying efforts identified in the Southwest Asia region, the IBCL is specifically lobbying North Atlantic Treaty Organization (NATO) members. This is in direct reaction to the United States military operations in Kosovo. The IBCL is urging Ottawa signatory countries that are also NATO members to challenge, rather than support, the United States insistence on the right to transfer or transit anti-personnel landmines through their territories, as well as stockpile them there. Additionally, the ICBL has emphasized the need for signatory countries to reach a common understanding of the term "assist," especially as it applies to combined or multinational military operations, foreign stockpiling of anti-personnel landmines, and foreign transit of mines across the territory of a signatory nation. The IBCL believes that full and effective

implementation of the treaty will be enhanced if signatory nations are clear and consistent with regard to what acts are permitted and what acts are prohibited.[100] Whether a result of the lobbying efforts of the IBCL or national altruistic aims, France and the Netherlands recently declared that they will not support, assist, or take part in operations with non-state parties that intend to use landmines.[101]

As long as the language of, and terms in, the Ottawa Treaty remain open to interpretation by individual nations, the United States can continue its efforts to encourage signatory nations to allow third party nations to transit and store self-destructing anti-personnel landmines. The current situation, where the language of the treaty is open to interpretation, allows the United States to use its diplomatic, informational, military, and economic power to negotiate the access and storage rights that are critical to globally projecting United States Army forces during crises. At the same time, the signatory countries have the ability to grant access and storage rights to a third party non-signatory nation without violating the terms of the Ottawa Treaty.

On the other hand, if the IBCL is successful in obtaining more restrictive language and definitions, or consensus among signatory countries for the same, the United States ability to obtain transit and storage rights in signatory countries may be in jeopardy. Of course, there is also the potential for signatory nations to withdraw from the Ottawa Treaty if language and definitions become more restrictive. Signatory nations may withdraw from the treaty fully six months after notification, or, if engaged in armed conflict, after termination of the conflict.[102] Withdrawal from the Ottawa Treaty is not likely due to the continuing public interest in the anti-personnel landmine ban, and a backlash that could force a nation to make decisions on transit and storage of a more altruistic nature.

Rather than withdraw, a nation could adopt the “neither confirm or deny” approach and hope that it never became public. The potential for loss of access and storage rights may

be mitigated somewhat by the advent of a “neither confirm nor deny” or “don’t ask” approach to access and storage rights with nations that are strong supporters of the United States and members of the Ottawa Treaty. Compared to the current status quo, this situation could lead to more nations denying the United States access and storage rights than granting them through a “neither confirm or deny” policy.

Whether the interpretation of the Ottawa Treaty remains status quo, or becomes more restrictive are the two situations the United States faces in the future. It appears that neither situation would completely prevent the United States from gaining either official or quasi-official access and storage rights in many signatory nations. The status quo and restrictive Ottawa Treaty situations provide a context in which to examine the potential impacts the Ottawa Treaty has on the force projection Army.

CHAPTER 3

ANALYSIS

As the Ottawa Treaty is currently written, interpreted, and being implemented by the signatory nations, there is an ambiguity in definitions that allows nations to interpret the treaty in such a way that it supports their individual national interests and security requirements. The foreign policies and allegiances of the various signatory nations appear to be the basis of the interpretations rather than the altruistic aims that led to the Ottawa Treaty in the first place. The lack of fully defined terms and the ability of individual nations to interpret it's obligations under the Ottawa Treaty allows third party non-signatory countries, such as the United States, to gain transit and storage rights in a signatory nation. For the United States, the status quo Ottawa Treaty does not appear to significantly inhibit its ability to project power in support of its national interests. The United States has the ability to obtain and retain transit and storage rights in many Ottawa Treaty signatory countries -- a fundamental requirement for using the strategic mobility triad to project a strategically responsive force Army force.

A more restrictive Ottawa Treaty, on the other hand, has the potential to reduce the number of signatory nations that will be willing to grant access and storage rights. This, in turn, has the potential to significantly reduce the ability of the United States to project combat power globally, however, this potential reduction in capability is regional versus global. Given the global distribution of Ottawa Treaty signatory countries, it appears that there would be little impact on the United States ability to project power to the Middle East and Asia from the United States.

The impact in Europe, however, would be significant due to the number of Ottawa Treaty signatory countries and large number of pre-positioned United States military units and resources located there. A restrictive Ottawa Treaty could lead to the loss of storage rights and a requirement to remove stockpiles of munitions containing self-destructing landmine munitions. Considering the fact that all Western European countries except FRY and Turkey have signed the Ottawa Treaty, there is the potential for a truly anti-personnel landmine free Western Europe. Obviously, relocating the munitions containing anti-personnel landmine to the United States or other locations in Eastern Europe or Turkey is an option, but in the event of a crisis on the European continent, it would be difficult with a restrictive Ottawa Treaty to bring anti-personnel landmines back to Europe.

In addition to the impact of the loss of the stockpiles in Europe, there is the question of the forward deployed Army forces stationed in Germany and Italy. A more restrictive interpretation of the Ottawa Treaty could have an impact on the ability to train Army units to utilize munitions containing anti-personnel landmines, and deploy United States Army forces that could potentially use anti-personnel landmines from European bases. The training and deployment issue relate directly to the definitions of “assist” and “encourage” in the Ottawa Treaty.

A more restrictive Ottawa Treaty could lead signatory nations to the conclusion that allowing a United States Army force to train to employ munitions containing anti-personnel landmines on their sovereign territory is a violation of the “assist” and “encourage” language of the treaty. Likewise, allowing a United States Army force to deploy from their sovereign territory to a location where the United Army may employ munitions containing anti-personnel landmines could be a violation of the treaty.

Worst case, a scenario such as this could potentially lead to a requirement to withdrawal United States Army forces from Europe. If the nations in Europe did adopt an

interpretation of the treaty that precluded third party nations from training with anti-personnel landmines within their sovereign territory, the United States could react by withdrawing United States Army force from Europe. The United States Army's doctrine and reliance on the tactical and operational benefits of using landmines could drive a requirement to reposition forward deployed forces, or bring them back to the United States. While this may not be the most feasible course of action for the United States considering the geopolitical importance of Europe, it is an option.

One way to mitigate the potential for such a drastic action is the adoption of a policy similar to "neither confirm nor deny." Signatory nations that support United States could un-officially allow access, storage and forward positioning of United States self-destructing anti-personnel landmine munitions and resources. The risk, however, may out weigh the benefits in a region with little to no real threat. The quasi-official approval of a signatory nation that accompanies the United States' "neither confirm nor deny" policy risks both internal and external public protests that could lead to a complete loss of access rights for the United States. Considering the emotional, altruistic and humanitarian forces that lead to the Ottawa Treaty in the first place, it may be wise to consider the potential for public outrage against such a policy.

While the analysis conducted so far provides some general indicators of the potential impacts of the Ottawa Treaty, it does not address all the impacts or potential impacts the Ottawa Treaty may have on the United States Army. Since the strategically responsive Army force is responsive, agile, versatile, lethal, survivable, and sustainable, an analysis of the impact of the status quo and restrictive Ottawa Treaty on these attributes should provide the cumulative effect of the treaty on the force projection Army.

IMPACT ON THE STRATEGICALLY RESPONSIVE ARMY

Of the seven attributes of a strategically responsive force, the Ottawa Treaty least affects the deployable attribute. This is primarily do to its focus on the internal preparations and planning for deployment based on the requirements, limitations, and constraints identified by the JFC. Army commanders insure forces are deployable by visualizing, planning, training, and rehearsing the process that projects a fully operational unit into a theater. The ability to deploy with or without self-destructing anti-personnel landmines has the potential to affect force packaging, but has little impact on the visualization, planning, training, and rehearsing of the process of deploying a force. As such, the status quo and the restrictive Ottawa Treaty have virtually no direct impact on the deployable attribute of a strategically responsive Army force.

Since the other six attributes of a strategically responsive force are more directly related to the mission assigned by the JFC, there is a greater likelihood that both the restrictive and non-restrictive variations of the treaty will have an affect. For example, the responsive attribute involves the stationing, moving, and positioning of units, resources, and equipment in such a way that the conditions for operational and tactical maneuver at the outset of operations are established. Since the United States continues to store self-destructing anti-personnel landmines in all but one of the countries it did before the Ottawa Treaty's entry into force, and maintains the ability to transit most of the signatory countries, it appears that the status quo Ottawa Treaty's impact on the attribute of responsive is minimal. One indicator of this fact is that the Ottawa Treaty's entry into force did not change the training or doctrine of the United States Army forces. A force that continues to maintain, train with, and expects to employ mixed self-destructing landmine munitions that include anti-personnel landmines.

The fact that some nations with altruistic aims interpret the Ottawa Treaty in a restrictive manner will have some impact on the responsive attribute. These nations will affect the United States' ability to project Army forces deploying with, or requiring the use of self-destructing anti-personnel landmines using the strategic mobility triad. The impact, however, will be no more than that experienced by the nations that occasionally deny over-flight, transit, or storage rights based on their own foreign policies, security requirements, internal political concerns or neutrality during a given operation.

Since the nations with a more restrictive interpretation are a known quality, the various interpretations of the Ottawa Treaty may provide more certainty for strategic mobility planners. As an added benefit, the Department of State can focus its efforts on obtaining and retaining transit and storage rights in countries with less restrictive interpretations that still provide access to areas of the world vital to the United States' national security interests. As such, the Ottawa Treaty in its status quo form becomes another factor to consider when the United States develops deployment plans, or reacts to a crisis.

In contrast to the status quo Ottawa Treaty, a restrictive Ottawa Treaty will have a greater impact on the responsive attribute however; this impact is regional rather than global. The impact in Asia and the Middle East appears to be less since there are less signatory countries. Mitigation of the loss of Diego Garcia or Japan as storage locations may be possible by repositioning munitions containing anti-personnel landmine to other locations in the regions. The situation in Europe is different.

There is the potential for a significant impact on the responsiveness attribute in Europe. This assessment is based on the potential loss of access and storage rights in Europe, the potential impact on training of Army forces in Europe, and potential adverse reaction of the population to a "neither confirm or deny" policy in Europe. Since the potential impacts of

a restrictive Ottawa Treaty will be different depending on the region, the overall impact of a restrictive interpretation of the treaty is moderate.

The analysis of the impact of the Ottawa Treaty on the responsive attribute provides a guide to accessing the impact on the remaining attributes of a strategically responsive Army. With a status quo Ottawa Treaty, the nations with a more restrictive interpretation may have some impact on the flexibility and innovation a commander could use in designing force packages. This impact would only be felt if the Army force or the strategic mobility asset moving it had no other choice other than to move through, or to an Ottawa Treaty country with a restrictive interpretation. In such a situation, building self contained force packages designed to achieve an economy of force, protect the force, and affect enemy's ability to maneuver without the benefit of the effects of self-destructing landmine munitions will be challenging. Worst case, studies indicate it would require an increase in resources of up to thirty percent to make up for the loss of the effects of munitions containing anti-personnel landmines. Correspondingly, force package size and lift requirements would increase if restrictive interpretations of the Ottawa Treaty prevented Army forces from deploying with munitions containing anti-personnel landmines.

The same analysis applies to a restrictive Ottawa Treaty. In order to accomplish an economy of force, affect the enemy's maneuver, and protect the force in regions of the world were munitions containing anti-personnel landmines are unavailable or prohibited, force package size and requirements for lift would increase. From a regional perspective, deployments to or from Europe could potentially require increased resources and lift assets. Deployment to Asia and the Middle East, however, would not require the same increases. This suggests that the overall affect of a restrictive Ottawa Treaty on the agile attribute is moderate, and the overall affect of a status quo Ottawa Treaty would be minimal. [103]

Like the analysis of the agile attribute, the resources required to achieve the same relative versatility, and the lift required to move the force increase when munitions containing anti-personnel landmines absent. Since the ability to utilize munitions containing anti-personnel landmines increases the versatility of a force package, this situation would occur when an Army force had no other choice but to deploy to, from, or through a country with a restrictive interpretation of the Ottawa Treaty or, in the case of the restrictive Ottawa Treaty, to a region such as Europe. This suggests that the overall affect of restrictive Ottawa Treaty on the agile attribute is moderate, while the effect of the status quo Ottawa Treaty would be minimal.

Analysis of the lethal attribute leads to similar conclusions since the ability to plan for and use self-destructing mixed landmine munitions enhances maneuver, firepower, and protection which in turn enhances the lethality of the strategically responsive Army force. The continued ability to obtain and retain basing, storage, transit, and access rights, and the ability to conduct force projection operations within Europe suggests that the status quo Ottawa Treaty, as currently written and interpreted, has not affected the doctrine, training or employment of forward deployed or CONUS based United States Army forces. Therefore, the status quo Ottawa Treaty appears to have minimal impact on the lethal attribute of a strategically responsive Army force.

The impact of a restrictive Ottawa Treaty, or a restrictive interpretation of the status quo Ottawa Treaty in certain cases will have an impact on the lethal attribute. In order to achieve the same relative lethality in a situation where munitions containing anti-personnel landmines are prohibited or unavailable, a deploying Army force would require more combat capability, logistical resources, and strategic lift assets. Since a restrictive Ottawa Treaty has a regional than global impact, the impact on the lethal attribute would be greater in Europe,

and less in Asia or the Middle East. This leads to the assessment that the overall impact on the strategically responsive Army force would be moderate.

The impact of the status quo and restrictive Ottawa Treaty on the survivable attribute is similar to the impact on the agile, versatile, and lethal attributes. This is due to the same enhancement effect that the use or ability to use self-destructing mixed landmine munitions provides in protecting the strategically responsive Army force. The inability to plan for and employ munitions containing self-destructing anti-personnel landmines that would exist in the case of a restrictive Ottawa Treaty or restrictive interpretation of the status quo Ottawa Treaty would generate increased force and lift requirements for a deploying Army force. As with the agile, versatile and lethal attributes the impacts would be regional rather than global, and the impact on the strategically responsive Army force would be moderate.

The analysis of the impacts of the status quo and restrictive Ottawa Treaty on the other attributes of a strategically responsive Army force provides basis for analyzing the sustainable attribute. The analysis of the agile, versatile, lethal and survivability attributes indicates that there could be a potential increase in force requirements and resources for both the restrictive and status quo Ottawa Treaty depending on regional signatory status, or individual country interpretation of the treaty. The increased force requirements and resource demands of a force deploying to or through a country with a restrictive interpretation of the Ottawa Treaty, or to some regions of the world in the case of a restrictive Ottawa Treaty generates more logistical support and sustainment requirements. This leads to the conclusion that there would be a corresponding increase in the logistical footprint.

Since commander's attempt to minimize the logistics footprint by balancing combat service support structure and sustainment requirements, the inability plan for or use munitions containing anti-personnel landmines has an impact on the sustainable attribute. As with the agile, versatile, lethal, and survivable attributes, the impact is in terms of increased

support assets, resources and lift requirements required to deploy the force. For the sustainable attribute, these increases are associated with the increased logistical footprint requirement, rather than the force designed to accomplish the strategically responsive Army force's military mission. Like the impact on the other attributes, the impact on the sustainable attribute would moderate in the case of a restrictive Ottawa Treaty, and minimal for the status quo Ottawa Treaty.

The cumulative effect of the Ottawa Treaty on the strategically responsive Army is similar to the analysis of the impact of the treaty on the sustainable attribute. Since the impact of the status quo Ottawa Treaty is minimal for all attributes, the cumulative impact of the status quo treaty is minimal. Similarly, the impact of the restrictive Ottawa Treaty is moderate for all but the deployable attribute. Therefore, the cumulative impact of the restrictive treaty is moderate. In both cases, however, there are countries or regions of the world where the treaty could have a significant impact on force projection a specific crisis in or where the only available access is through an Ottawa Treaty signatory country with a restrictive interpretation.

From a purely global perspective, the Ottawa Treaty – status quo or restrictive – has at best a moderate impact on the strategically responsive of the United States Army. Unfortunately, the interests of the United States are regional. Depending on where a crisis occurs globally, the Ottawa Treaty has the potential to affect the ability of the United States to project a strategically responsive Army force capable of conducting deterrence, and persecuting combat operations if deterrence fails. The impact may be minimal, moderate or significant depending on the region or countries involved, but the potential impact may prevent the United States Army from responding globally with the right force at the right time to achieve the mission.

CHAPTER 4

SUMMARY AND RECOMMENDATIONS

The United States' overarching requirement for access to other nations is central to the Ottawa Treaty's impact on strategic responsiveness. Formal or informal restrictive interpretations of the Ottawa Treaty can affect the ability to obtain access, storage and basing rights. These permissions are integral to using the strategic mobility triad to move the force across, into or within the international borders of a nation. Since individual countries have the ability to interpret the status quo Ottawa Treaty as they see fit, there is the potential for significant impacts for any given signatory country. Examples of potentially significant impacts are Spain's request for the United States to remove its stockpiles of munitions containing anti-personnel mines, and France and the Netherlands' recent announcements not to support, assist, or take part in operations with non-state parties that intend to use landmines.

Since all three countries are in Europe, and France, Spain, and especially the Netherlands are coastal countries with significant port facilities, there is a potential regional impact that could be significant under the status quo Ottawa Treaty. The impact on the strategically responsive Army force would increase if, and when more countries in Europe adopt similar policies or the Ottawa Treaty becomes restrictive. A restrictive treaty could result in the potential loss of all access permissions in Europe for forces that utilize munitions containing anti-personnel landmines. Due to the high density of Ottawa Signatory nations in Europe, a restrictive Ottawa Treaty could prevent United States forces from accessing Eastern Europe from Western Europe.

Similar regional loss of access could occur worldwide under a restrictive Ottawa Treaty. A restrictive treaty could result in the loss of permissions in 33 of the 35 nations in the Americas, 43 of the 53 nations in Africa, and 11 of the 14 nations in Oceania. The potential impact of lost permissions on a large scale may be mitigated if allies of the United States, or nations in critical locations around the world that have signed the Ottawa Treaty nations can be persuaded to adopt a variant of a "neither confirm or deny" policy. Depending on the region and country, access to and pre-positioning assets in non-signatory countries can also mitigate the potential impact of a restrictive Ottawa Treaty. Based on the current signatory status of nations, there would be a greater chance of this occurring in the Asia region where only 15 of 45 nations have signed, ratified, or accessed the Ottawa Treaty.

As demonstrated in the analysis of the impact of the Ottawa Treaty on the seven attributes of a strategically responsive Army force, the loss of access and positioning rights for forces requiring the use of munitions containing anti-personnel landmines increases both resource and lift requirements during force projection. These increases enable a force to achieve the same lethality, versatility, and survivability as a force with the ability to use munitions containing anti-personnel landmines. The same increases in resources and lift requirements decrease the responsiveness, agility, and sustainability of a strategically responsive Army force.

In light of the potential impacts a formal or informal restrictive interpretation of the Ottawa Treaty has on a strategically responsive Army force, the United States has a vested interest in retaining and obtaining the ability to transit, store and base forces and munitions containing anti-personnel landmines in countries around the world. The United States' efforts to persuade signatory countries to liberally interpret the Ottawa Treaty appears to indicate that diplomatic efforts are directed at retaining the ability to get the permissions that support force projection of United States Army forces. These diplomatic efforts should continue until

viable Ottawa compliant alternatives to anti-personnel landmines are developed and produced in sufficient quantities.

There are challenges to the United States' diplomatic efforts to encourage signatory countries to liberally interpret the Ottawa Treaty. Among them are the IBCL's lobbying efforts, the global anti-personnel landmine problem, and the altruistic actions of individual nations. Of these, the IBCL's lobbying efforts to make the Ottawa Treaty more restrictive appears to have the greatest potential for worldwide impact, but diplomacy can potentially overcome its effects. The altruistic actions of individual nations founded in the popular support of the people to take action against the recognized global landmine problem may be more difficult to overcome.

A nation that altruistically interprets the treaty restrictively has a singular effect on force projection, and may not be willing to adopt a quasi-official "neither confirm or deny" policy that permits access. For a single nation in a region, the United States can mitigate the impact on strategic responsiveness by initiating diplomatic efforts to obtain the necessary permissions in other countries in the region, and repositioning or diverting elements of the strategic mobility triad to and through more accommodating nations in the region. There is the potential, however, for several like-minded nations in a region to have similar altruistic aims. Multiple nations acting altruistically to restrictively interpret the Ottawa Treaty could create a region that difficult to impossible for the United States to access, transit, or pre-position resources. This may be the most serious threat to power projection the Ottawa Treaty poses to the United States in the future.

In a situation where access, transit and pre-positioning of munitions containing anti-personnel landmines in a region is not possible due to the altruistic aims of a group of nations, the United States may have to accept the impact on a strategically responsive Army force if it chooses to involve itself in a crisis in that region. As mentioned previously, lift and

resource requirements increase in the absence of munitions containing anti-personnel landmines. For a force reliant on the use of munitions containing anti-personnel landmines, there is also an impact on the preparation and training of units for operations in the absence of munitions containing anti-personnel landmines.

In order to maintain its ability to respond globally and be responsive, the United States Army would have to refine its doctrine and train units to accomplish deterrence and combat operations without the benefits of munitions containing anti-personnel landmines. If the region were of significant strategic interest, the United States military would also have to evaluate its strategic mobility capabilities to ensure the lift and pre-positioned assets required to meet contingencies in the region are adequate. Together, these two reactions by the United States, in effect, would create an Ottawa Treaty compliant strategically responsive Army force, and make the current United States anti-personnel landmine policy obsolete.

CONCLUSIONS

Until the availability of viable and sufficient quantities of anti-personnel landmines, the potential exists for the Ottawa Treaty to significantly affect the worldwide strategic responsiveness of the United States Army. Less a function of the language of the treaty, the altruistic aims of an individual nation that results in a restrictive interpretation of the treaty and their geographic location are the major factors that will determine the level of impact for any given crisis. Since there are ways to mitigate the impact of a single nation in a region denying access, storage or transit rights to the United States based on their interpretation of the treaty, the impact will be greatest if a group of nations in a region of vital strategic interest of the United States decide to restrictively interpret the Ottawa Treaty.

The IBCL's efforts to obtain a comprehensive review and redefinition of the Ottawa Treaty language to make the treaty itself more restrictive does not have the same potential for significant impact. At best, these efforts will have a moderate impact on the strategically responsive Army force. A more restrictive treaty without extensive verification, implementation and compliance components still may allow the United States to obtain and retain quasi-official access, storage and transit rights through signatory countries. There is, however, some risk involved due to the potential for public outrage if the policy becomes common knowledge.

While the potential exists for significant and moderate impacts on strategic responsiveness based on the altruistic aims of individual nations or the advent of a restrictive Ottawa Treaty, the status quo Ottawa Treaty as the majority of the nations of the world currently interpret it has a minimal impact on strategic responsiveness. The United States continues to have the access, transit and storage rights required to project strategically responsive Army forces. As with any projection of power, both Ottawa Treaty signatory countries and other nations of the world have the ability to grant or deny the United States the right to use their sovereign territory for power projection depending on their own national security concerns, foreign policy and internal politics.

The ability of signatory nations to liberally interpret the Ottawa Treaty language allows them the flexibility to grant access, storage and transit rights if it is in their interest. In order to facilitate the retention and granting of permissions that are required to project power using the strategic mobility triad, the United States' diplomatic efforts to lobby signatory nations to adopt liberal interpretations of the Ottawa Treaty should continue. If successful, these diplomatic efforts will remove one potential roadblock in the path of the strategically responsive Army force.

END NOTES

[1] Department of the Army, *FM 3.0 Operations (DRAG Edition)*, (Washington D.C.: Government Printing Office, 15 June 2000), 1-1 – 1-2.

[2] Ibid., 3-1 – 3-2.

[3] Mary H. Cooper, "Banning Landmines," *CQ Researcher,* 08 August 1997, 713. In July 1997 the Chairman of the Joint Chiefs of Staff, and ten regional and functional area commanders sent a letter to the Senate Armed Services Committee Chairman that stated that landmines are a combat multiplier for land forces. This letter indicates that with the draw down in force structure, self-destructing landmines maximize the effects of weapon systems, enhance force protection, and are particularly important to early entry and light forces which must be prepared to fight out numbered during the initial stages of a deployment.

[4] David A. Ottignon, *Losing Anti-Personnel Landmines: An Economy of Force,* Naval War College Research Paper, ADA363214, 05 February 1999, 4 - 8.

[5] Office of the Under Secretary of Defense for Policy, *Report to the Secretary of Defense on the Status of DoD's Implementation of the U.S. Policy on Anti-Personnel Landmines*, May 1997. Currently policy states that until such time as an international agreement takes effect, the U.S. will reserve the option to use self-destructing / self-deactivating APL in Korea and elsewhere to safeguard American lives and hasten the an end to fighting.

[6] Ibid. In Korea, the U.S. retains the right to use NSD APL until APL alternatives become available.

[7] Department of Defense, *JP 3-35 Joint Deployment and Redeployment Operations,* (Washington, D.C.: Government Printing Office, 07 September 1999), II-24.

[8] "Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction," *Multilateral treaties deposited with the Secretary-General-TREATY I-XXVI—7*, (http://www.unog.ch/disarm/distreat/ottawa.htm), 18 September 1997. Accessed 12 October 2000.

[9] Ibid.

[10] Vietnam Veterans of America Foundation, *Campaign for a Landmine Free World*, (http://www.vvaf.org). Accessed 12 October 2000. The Ottawa Landmine Treaty entered into force on 01 March 1999.

[11] Ibid. Many human rights groups consider anti-personnel landmines the root of a humanitarian crisis of epidemic proportions. This is the driving factor behind the move to ban anti-personnel landmines. It is generally accepted that over 100 million landmines have been emplaced worldwide. The majority of these are non-self-destructing mines that remain active in the ground virtually indefinitely. It is estimated that 20 new mines are laid for every mine cleared and that up to 26 000 people each year are killed or injured by anti-personnel landmines.

[12] Anonymous, "The Ottawa Landmine Treaty," *Arms Control Today*, Volume 27, Issue 6 (September 1997). 11.

[13] *Multilateral treaties deposited with the Secretary-General- TREATY I-XXVI—7.*

[14] United Nations, *List of Member States*, (http://www.un.org/Overview/List_of_Member_ States.htm). Accessed 23 October 2000. The United Nations currently has 189 member nations.

[15] Department of State, *Independent States in the World*, (http://www.state.gov/www/regions/ independent_states.html). Accessed 23 October 2000. The United States currently maintains that there are 191 independent states in the world.

[16] International Committee of the Red Cross, *Implementing the Ottawa Treaty: Questions and Answers*, (http://www.icrc.org/icrceng.nsf/). 14 October 1999. Accessed 23 October 2000. Accessing a treaty is synonymous with ratifying a treaty. It is a question of timing. A country ratifies a treaty prior to the treaty entering into force. A country is accesses a treaty, or is accessed into a treaty if the treaty has already entered into force.

[17] Mine Action Canada, *Ban Around the World at a Glance*, (http://www.minesactioncanada. com/). Accessed 20 October 2000.

[18] International Committee to Ban Landmines, *1997 Mine Ban Treaty – NON-SIGNATORIES*, (http://www.icbl.org/treaty/nonsign.php3). Accessed 29 October 2000. As of 07 September 2000, the IBCL lists 55 non-signatory countries. They are Afghanistan, Armenia, Azerbaijan, Bahrain, Belarus, Bhutan,

Central African Republic, China, Comoros, Congo (Brazzaville), Cuba, D.R. Congo, Egypt, Eritrea, Estonia, Finland, Georgia, India, Iran, Iraq, Israel, Kazakhstan, North Korea, South Korea, Kuwait, Kyrgyzstan, Laos, Latvia, Lebanon, Libya, Micronesia, Mongolia, Morocco, Myanmar (Burma), Nepal, Nigeria, Oman, Pakistan, Palau, Papua New Guinea, Russia, Saudi Arabia, Singapore, Somalia, Sri Lanka, Syria, Taiwan, Tonga, Turkey, Tuvalu, United Arab Emirates, United States Of America, Uzbekistan, Vietnam, and Yugoslavia.

[19] United States Air Force Europe, *105 Formal Status of Forces Agreements (SOFAs) with the United States*, (http://wwwmil.usafe.af.mil/direct/ja/JAI/sofalist.html), 14 August 2000. Accessed 20 October 2000.

[20] The Arms Control Association. *Analysis and Text of Ottawa Treaty*, (http://www.armscontrol.org/ACT/sept97/apltreat.htm), September 1997. Accessed 12 October 2000.

[21] Ibid. The Claymore Mine is the only "mine" designed as an anti-personnel weapon that the United States has in its inventory that is compliant under the Ottawa Treaty. The is due to the command detonation initiation mechanism. All other anti-personnel mines in the United States inventory to include its self-destructing / self-deactivating mines are not Ottawa Treaty compliant according to this definition.

[22] *Multilateral treaties deposited with the Secretary-General- TREATY I-XXVI—7.*

[23] Ibid.

[24] Ibid.

[25] Ibid.

[26] Ibid.

[27] Ibid.

[28] Marissa A. Vitagliano, *NGO letter to President Clinton,* (http://www.icbl.org/prelease/1998/aug7.html), August 1987. Accessed 29 October 2000.

[29] Mary Wareham, *Fact Sheet: Antipersonnel Landmine Stockpiles And Their Destruction*, (http://www.icbl.org/lm/1999/stockdestr.htm). Accessed 29 October 2000. The US has over 200,000 anti-personnel mine systems stockpiled in 10 countries around the world. Seven of the countries are signatory to the Ottawa Treaty.

[30] International Committee to Ban Landmines, *Letter from ICBL to the States Parties upon the second meeting of the Mine Ban Treaty's Standing Committee of Experts (SCE)*, (http://www.icbl.org/prelease/2000/may25.php3), 12 May 2000. Accessed 29 October 2000. As of this writing the results of this conference have not been made public.

[31] The Arms Control Association.

[32] Vietnam Veterans of America Foundation, *Campaign for a Landmine Free World.*

[33] International Committee of the Red Cross, *Implementing the Ottawa Treaty: Questions and Answers.*

[34] Human Rights Watch, *Landmine Monitor Report 2000*, (http://www.hrw.org/reports/2000/landmines/LMWeb-01.htm). Accessed 25 November 2000. Twenty governments reported that implementation legislation was enacted: Austria, Australia, Belgium, Cambodia, Canada, Czech Republic, France, Germany, Guatemala, Hungary, Italy, Japan, Luxembourg, Monaco, New Zealand, Nicaragua, Norway, Spain, Switzerland, and the United Kingdom. Macedonia and Sweden reported that adequate implementation measures were taken. Eight countries indicated that the treaty has been incorporated into domestic law, or that existing law were adequate: Denmark, Ireland, Jordan, Mexico, Namibia, Portugal, Slovakia, and Yemen. Ten states have drafted legislation that has not yet become law: Bosnia and Herzegovina, Bulgaria, Croatia, Malaysia, the Netherlands, and Trinidad and Tobago. Albania, Iceland, and South Africa report that preparations to enact laws are underway. Some governments indicated that they do not believe an implementation law is required, because they have never possessed AP mines, are not mine-affected, and no special action is necessary to fulfill the terms of the treaty.

[35] Paul Donovan, "Dodging the Ban," *New Internationalist* 325 (July 2000), 6. While Great Britain has signed, ratified, and passed legislation to implement the Ottawa Treaty, it failed to enforce statutes during the September 1999 Defense Systems and Equipment International Exhibition. Two companies reportedly displayed and attempted to sell anti-personnel landmines during the arms show without ramification.

[36] Ottignon, 3.

[37] Dale A. Carr, *An Evaluation of the U.S. Policy on Anti-Personnel Landmines*, U.S. Army War College Strategic Research Project, ADA364457, 07 April 1999. 18. The United States munitions

containing self-destructing anti-personnel mines deactivate or self-destruct with a 99.9 percent assurance rate. This, in the United States' opinion anyway, meets the standard for de-mining set by the United Nations and does not contribute to the global landmine problem.

[38] International Action Network on Small Arms, *Destruction of the Last Non-Self Destructing Anti-Personnel Landmines in the U.S. Based Stockpile*, (http://www.defenselink.mil/news/jun1998/), 25 June 1998. Accessed 23 October 2000.. The United States completed the destruction of its CONUS stockpile of non-self destructing landmines on 30 June 1998.

[39] Carr, 3 – 5.

[40] The White House Office of the Press Secretary, *A National Security Strategy for a New Century*, (http://cryptome.org/nss2000.zip), 05 January 2000. Accessed 03 October 2000.

[41] Center for Security Policy, "Joint Chiefs of Staff Letter to the Honorable Strom Thurmond, Chairman Senate Armed Services Committee," *Publication of the Center for Security Policy No. 97-D 97 (Attachment)*, (http://www.security-policy.org/papers/1997/97-D97at.html), 14 July 1997. Accessed 29 October 2000. On 14 July 1997, the Joint Chiefs of Staff and ten regional and functional commanders sent a letter to the Chairman of the Senate Armed Services Committee outlining the tactical and operational importance of anti-personnel landmines.

[42] International Committee of the Red Cross, *Anti-personnel Landmines – Friend or Foe*, Geneva, March 1996. 71.

[43] Phillip Shenon, "Clinton to Act on Banning Many Type of War Mines," *New York Times*, 16 May 1996. A –12. Officers signing the letter included former Chairman of the Joint Chiefs of Staff, General David C. Jones, and 14 other retired senior military officers including General Norman Schwarzkopf.

[44] Center for Security Policy.

[45] See Carr and Ottignon. Other studies that reached the conclusion that there is an both and operational and tactical advantage to using anti-personnel landmines include Lance P. Sprowls, *Replacing the Anti-personnel Landmine in the Force Protection Role*. Naval War College Student Research Paper, ADA370723, 17 May 1999, Thomas Supplee, *Not Without Risk: Operational Analysis of a Landmine Ban*. Naval War College Paper, ADA349337, 13 February 1998, and John F. Troxell, "Landmines: Why the Korea Exception Should be the Rule." *Parameters*, (Spring 2000). 82 –101.

[46] Ottignon, 4 – 7. Anti-personnel landmines are an integral part of landmine systems. Not only do the APLs provide early warning and deter dismounted approach by the enemy, they are critical to the integrity of the minefield. Anti-personnel landmines protect the AT mines that deter, canalize and affect the movement of mounted enemy forces.

[47] Department of the Army, *FM 5-102 Countermobility*, (Washington, D.C.: Government Printing Office, 1985), 3-5 – 3-34. Although the numbers vary slightly there are typically up to nine vehicle mounted Volcano systems organic to a division. The MOPMS dispensers, on the other hand, are a basic load item for many combat units designed to create protective obstacles. Both systems create mixed minefields containing both AP and AT mines.

[48] Jon N. Jones, *United States Army Operations Under the Ottawa Convention: Mine Warfare without Antipersonnel Landmines*, Command and General Staff College Master's Thesis, ADA367686, 23 August 1999, 73 – 74.

[49] Nigel Vinson, "Demise of the Anti-personnel Landmine: A Military Perspective," *RUSI Journal*, Vol 143, No. 1, February 1998. 19. In order to make up for the inability to use landmines, studies indicate that additional ground forces in the form of maneuver, artillery, and combat engineers units will be required in addition to increases in close air support. While the exact combination of units and capabilities depends on the situation, the conclusions of the studies indicate that additional units (combat multipliers) rather than just materials are required, and even then do not fully make up for the loss of the effects of anti-personnel landmines.

[50] Carr, 22.

[51] Troxell, 95 – 99.

[52] *FM 3.0 Operations*, 3-1 – 3-2.

[53] Ibid., 3-2.

[54] Ibid., 3-3.

[55] Troxell, 100. This article reiterates the operational and tactical significance of mines. Mines mitigate risk during initial and early entry operations and defensive scenarios. Given the uncertainty of the

nature of future threats and need to be capable of conducting operations across the full spectrum of conflict implies that the Army force must continue to train with mixed landmine munitions. The importance and significance of integrating fires and effects with minefields can be found in Department of the Army Field Manuals from Corps to Company level.

[56] *FM 3.0 Operations*, 3-4.

[57] Ibid., 3-4.

[58] Ibid., 3-5.

[59] Ibid., 3-5.

[60] Ottignon, 4.

[61] *FM 3.0 Operations*, 3-5.

[62] Ibid., 3-5.

[63] Jones, 63 – 64.

[64] *FM 3.0 Operations*, 3-6.

[65] Ibid., 3-13.

[66] Ibid., 3-14 – 3-15.

[67] Ibid., 3-14. Mobilization is the process of assembling and organizing national resources in time of war or other emergencies, and the process by which the armed forces of the United States or part of it are brought to a state of readiness. It includes activating the all or part of the reserves as well as assembling and organizing personnel, supplies and material.

[68] Ibid., 3-14. Employment is the conduct of operations to support the Joint Force Commander.

[69] Togo D. West, Jr and Dennis J. Reimer, *A Statement on the Posture of the United States Army Fiscal Year 1998*, (http://www.army.mil/aps/98/), February 1997. Accessed 27 October 2000. This theme was reiterated in the fiscal year 2001 Army Posture Statement.

[70] Louis Caldera and Eric K. Shinseki, *A Statement on the Posture of the United States Army Fiscal Year 2001*, (http://www.army.mil/aps/ default.htm), February 2000. Accessed 15 November 2000. Strategic mobility provides the Nation with the ability to rapidly deploy Army forces.

[71] Department of Defense, *Joint Publication 1-02 Department of Defense Dictionary of Military and Associated Terms*, (Washington, D.C.: Government Printing Office, 23 March 1994 (as amended through 10 January 2000)), 429.

[72] Department of Defense, *JP 3-35 Joint Deployment and Redeployment Operations*, (Washington, D.C., Government Printing Office, 07 September 1999), I-7.

[73] Ibid., I-7 – I-8.

[74] Ibid., I-9.

[75] Ibid., II-24.

[76] Department of State, *Bureau of Political-Military Affairs*, (http://www.state.gov/www/global/arms/bureaupm.html). Accessed 29 October 2000.

[77] Department of Defense, *JP 3-08 Interagency Coordination During Joint Operations Volume 1*, (Washington, D.C.: Government Printing Office, 09 October 1996), II-15 – II-17.

[78] United States European Command, *Directive Number 64-1 Transportation Policy and Management (Draft)*, 15 November 1999, 12.

[79] Air University Library, *The Libya Raid, April 1986*, (Operation El Dorado Canyon (http://www.au.af.mil/au/aul/ bib/libya/libyrd99.htm). Accessed 20 October 2000. France denied the United States over flight transit rights for United State Air Force attack aircraft stationed in England during the execution of the April 1986 raid on Libya. France did not support the punitive use of force against Libya. This resulted in the aircraft being rerouted and diverted several thousand miles during execution of the raid and an increase in mission resources due to mid-air refueling requirements.

[80] Department Of Defence Canberra (Australia), *Visits by Nuclear Powered Warships to Australian Ports*, ADA355700, 1998. 1 - 2.

[81] Hans M. Kristensen, *Japan Under the US Nuclear Umbrella* (http://www.nautilus.org/nuke policy/Nuclear-Umbrella/index.html), 21 July 1999. Accessed 29 October 2000.

[82] Wareham. Spain has requested that the United States remove its stockpiles of landmines not later than 1 July 1999.

[83] Diego Garcia is an overseas territory of the United Kingdom.

[84] Wareham.

[85] Weddle, 17.

[86] Department of Defense, *JP 3-35 Joint Deployment and Redeployment Operations*, III-21.

[87] Ibid., III-4.

[88] Louis Caldera and Eric K. Shinseki, *A Statement on the Posture of the United States Army Fiscal Year 2001*, (http://www.army.mil/aps/default.htm), February 2000. Accessed 15 November 2000. According to the Army leadership there was the potential for escalation to ground combat occurred during the deployment of Task Force Hawk in support of Operation Allied Force to Albania in April 1999, and the deployment of ground forces to Kuwait during Operation Desert Fox in November 1998.

[89] Ibid. The additional soldiers deploying to Kuwait deployed from the United States through air bases in Europe.

[90] Ibid.

[91] Human Rights Watch, *Landmine Monitor Report 2000*. The IBCL's international lobbying efforts include trying to convince state parties that it would violate the spirit and likely the letter of the treaty for States Parties to permit the United States (or any other government or entity) to stockpile antipersonnel mines on, or allow the refueling, departure or transit of airplanes, ships or vehicles carrying anti-personnel landmines through their territory.

[92] Center for Army Lessons Learned (CALL), *CALL Newsletter 00-8 TTP from Task Force Hawk Deep Operations*, Volume 1 (http://call.army.mil/call/newsltrs/00-8). Accessed 23 October 2000.

[93] Ibid.

[94] Matt Pasvogel, interview by author, 09 January 2001. Captain Pasvogel was an engineer company commander who deployed with Task Force Hawk. His unit deployed with both MOPMS and Volcano mine dispensing equipment and mixed self-destructing AP/AT mines. Munitions that were not employed during the mission, but were available in Albania for use if the need did arise.

[95] CALL, *CALL Newsletter 00-8 TTP from Task Force Hawk Deep Operations*. There was no direct ground combat between FRY and United States ground forces in Albania.

[96] International Committee to Ban Landmines, *Ratification Updates*, (http://www.icbl.org/treaty/). Accessed 29 October 2000. Albania did not ratify the Ottawa Treaty until 29 February 2000.

[97] CALL, *CALL Newsletter 00-8 TTP from Task Force Hawk Deep Operations*.

[98] ICBL, *Ratification Updates*.

[99] Human Rights Watch, *Landmine Monitor Report 2000*.

[100] Ibid.

[101] Ibid.

[102] Ibid.

[103] From Chapter 1, the attribute of agility manifests itself in the commander's ability to balance lift limitations, assigned and anticipated tasks, and support requirements in order to design force packages with sufficient mobility and sustainment to accomplish their mission.

BIBLIOGRAPHY

Books and Periodicals

Association of the United States Army. *The U.S. Army in Operation Desert Storm: An Overview*. Arlington, Virginia: Association of the United States Army, 1991.

Bosse, Wade. "Fortieth Ratification Set the Clock for Ottawa Treaty's Entry into Force." *Arms Control Today*, Volume 28, Issue 6 (August/September 1998). 27.

Cameron, Maxwell A., Robert J. Lawson, and Brian W. Tomlin. *To Walk without Fear: The Global Movement to Ban Landmines*. Toronto, New York: Oxford University Press, 1998.

Cooper, Mary H. "Banning Landmines." *CQ Researcher* (08 August 1997). 713.

Donovan, Paul. "Dodging the Ban." *New Internationalist*, no. 325 (July 2000). 6.

Engelage, James R. *Operation Desert Storm: the Mobilization and Deployment of Reserve Component Units to the Persian Gulf, 1990 – 1991*. Fort Sheridan, Illinois: Forth U.S. Army, 1991.

Kaldor, Mary. *The US Raids on Libya*. London: Pluto in association with European Nuclear Disarmament, 1986.

Shenon, Phillip. "Clinton to Act on Banning Many Type of War Mines," *New York Times*. 16 May 1996. A –12.

Swain, Richard M. *"Lucky War": Third Army in Desert Storm.* Fort Leavenworth, Kansas: U.S. Army Command and General Staff College Press, 1994.

Turabian, Kate L. *A Manual for Writers of Term Papers, Theses, and Dissertations*. 6th ed. Chicago: University of Chicago Press, 1987.

Troxell, John F. "Landmines: Why the Korea Exception Should be the Rule." *Parameters*, (Spring 2000). 82 –101.

Venkus, Robert E. *Raid on Qaddafi: The Untold Story of History's Longest Fighter Mission by the Pilot who Directed it*. New York: St. Martin's Press, 1992.

Vinson, Nigel. "Demise of the Anti-personnel Landmine: A Military Perspective." *RUSI Journal*, Vol 143, No. 1, February 1998.

Anonymous. "The Ottawa Landmine Treaty." *Arms Control Today*, Volume 27, Issue 6 (September 1997). 11 – 12.

Internet Resources

Air University Library. *The Libya Raid, April 1986, (Operation El Dorado Canyon)*, (http://www.au.af.mil/au/aul/bib/libya/libyrd99.htm). Accessed 20 October 2000.

Caldera, Louis and Eric K. Shinseki. *A Statement on the Posture of the United States Army Fiscal Year 2001*, (http://www.army.mil/aps/default.htm), February 2000. Accessed 15 November 2000.

Center for Army Lessons Learned. *CALL Newsletter 00-8 TTP from Task Force Hawk Deep Operations*, Volume 1 (http://call.army.mil/call/newsltrs/00-8). Accessed 23 October 2000.

Center for Security Policy. "Joint Chiefs of Staff Letter to the Honorable Strom Thurmond, Chairman Senate Armed Services Committee." *Publication of the Center for Security Policy No. 97-D 97 (Attachment)*, (http://www.security-policy.org/papers/1997/97-D97at.html), 14 July 1997. Accessed 29 October 2000.

Department of Army. *Army Posture Statement*, (http://www.army.mil/aps/98/), 17 March 1997. Accessed 03 October 2000.

Department of State. "State Department Honors International Campaign to Ban Landmines Ambassador Tun Channareth and Cambodian Author and Anti-Landmine Spokesperson Loung Ung," *U.S. Department of State Office of the Spokesman Press Statement*, (http://secretary.state. gov/www/briefings/statements/2000/ps000110.html), 10 January 2000. Accessed 03 October 2000.

_____. *Independent States in the World*, (http://www.state.gov/www/regions/independent_ states.html). Accessed 23 October 2000.

_____. *Hidden Killers 1994: The Global Landmine Crisis*, (http://www.state.gov/ www/global/arms/ rpt_9401_demine_toc.html). Accessed 23 October 2000.

_____. "Africa." *FOREIGN RELATIONS OF THE UNITED STATES 1964-1968*, Volume XXIV (http://www.state.gov/www/about_state/history/vol_xxiv/r.html). Accessed 29 October 2000.

_____. *Arms Control and International Security*, (http://www.state.gov/www/global/arms/ index.html). Accessed 29 October 2000.

_____. *Bureau of Political-Military Affairs*, (http://www.state.gov/www/global/arms/ bureaupm.html). Accessed 29 October 2000.

Encyclopædia Britannica. *Sovereignty*, (http://www.britannica.com/bcom/email/article/ 1,5813,70726+ 1,00.html). Accessed 23 October 2000.

Human Rights Watch. *Landmine Monitor Report 2000*, (http://www.hrw.org/reports/ 2000/landmines/LMWeb-01.htm). Accessed 25 November 2000.

International Action Network on Small Arms. *The Ottawa Process*, (http://www.iansa.org/ documents/research/the_ottawa_process.htm). Accessed 23 October 2000.

_____. *Destruction of the Last Non-Self Destructing Anti-Personnel Landmines in the U.S. Based Stockpile*, (http://www.defenselink.mil/news/jun1998/), 25 June 1998. Accessed 23 October 2000.

International Committee of the Red Cross. *Implementing the Ottawa Treaty: Questions and Answers*, (http://www.icrc.org/icrceng.nsf/). 14 October 1999. Accessed 23 October 2000.

International Committee to Ban Landmines. *Campaign to Ban Landmines*, (http://www.landmine.ro/). Accessed 12 October 2000.

_____. *Letter from ICBL to the States Parties upon the second meeting of the Mine Ban Treaty's Standing Committee of Experts (SCE),* (http://www.icbl.org/prelease/2000/may25.php3), 12 May 2000. Accessed 29 October 2000.

_____. *Mauritania Marks the 100th Ratification of the Mine Ban Treaty*, (http://www.icbl.or/new/), 26 July 2000. Accessed 23 October 2000.

_____. *Ratification Updates*, (http://www.icbl.org/treaty/). Accessed 29 October 2000.

_____. *1997 Mine Ban Treaty – NON-SIGNATORIES*, (http://www.icbl.org/treaty/nonsign.php3). Accessed 29 October 2000.

Kristensen, Hans M. *Japan Under the US Nuclear Umbrella,* (http://www.nautilus.org/nukepolicy/ Nuclear-Umbrella/index.html), 21 July 1999. Accessed 29 October 2000.

Military Analysis Network. *Operation El Dorado Canyon*, (http://www.fas.org/man/dod-101/ops/el_dorado_canyon.htm). Accessed 20 October 2000.

Mine Action Canada. *Ban Around the World at a Glance,* (http://www.minesactioncanada.com/). Accessed 20 October 2000.

Office of the Under Secretary of Defense for Policy. *Report to the Secretary of Defense on the Status of DoD's Implementation of the U.S. Policy on Anti-Personnel Landmines,* (http://defenselink.ditc.mil/pubs/landmines/), May 1997. Accessed 12 October 2000.

Office of the Assistant Secretary of Defense (Public Affairs). *DoD Releases Status on Anti-personnel Landmines*, (http://www.defenselink.dtic.mil/news/). Accessed 03 October 2000.

Schubert, Frank N. and Theresa L. Kraus, General Editors. *The Whirlwind War: The United States Army in Operations DESERT SHIELD and DESERT STORM*, (http://www.army.mil/cmh-pg/books/www/Wwindx.htm). Accessed 29 October 2000.

Stohl, Rachel. "Ottawa Landmines Treaty Enters Into Force," *Center for Defense Information Weekly vol 3*, Issue 9 (http://www.cdi.org/weekly/1999/issue09.html), 04 March 1999. Accessed 12 October 2000.

The Arms Control Association. *Analysis and Text of Ottawa Treaty*, (http://www.armscontrol.org/ACT/sept97/apltreat.htm), September 1997. Accessed 12 October 2000.

The Ministry of Foreign Affairs of Japan. *Press Conference by the Press Secretary 2 March, 1999*, (http://www.mofa.go.jp/announce/press/index.html), 02 March 1999. Accessed 23 October 2000.

The White House Office of the Press Secretary. *A National Security Strategy for a New Century*, (http://cryptome.org/nss2000.zip), 05 January 2000. Accessed 03 October 2000.

United Nations. "Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and their Destruction," 18 September 1997. *Multilateral treaties deposited with the Secretary-General- TREATY I-XXVI—7*. (http://www.unog.ch/disarm/distreat/ottawa.htm), 18 September 1997. Accessed 12 October 2000.

_____. *Growth in UN Membership 1945 – 2000*, (http://www.un.org/Overview/growth.htm). Accessed 23 October 2000.

_____. *List of Member States*, (http://www.un.org/Overview/List_of_Member_States.htm). Accessed 23 October 2000.

_____. *UN in Brief*, (http://www.un.org/Overview/UN_in_brief.htm). Accessed 23 October 2000.

United States Army Engineer School. *Engineer Prioritization Paper*, (http://www.wood.army.mil/eschool/prioritization_paper.htm#Prioritization Paper), 18 June 1999. Accessed 20 August 2000.

United States Air Force Europe. *105 Formal Status of Forces Agreements (SOFAs) with the United States*, (http://wwwmil.usafe.af.mil/direct/ja/JAI/sofalist.html), 14 August 2000. Accessed 20 October 2000.

United States European Command. *Logistics and Security Assistance Directorate*, (http://www.eucom.mil/hq/ecj4/sitemap.htm). Accessed 20 October 2000.

Vietnam Veterans of America Foundation., *Campaign for a Landmine Free World*, (http://www.vvaf.org/). Accessed 12 October 2000.

Vitagliano, Marissa A. *NGO letter to President Clinton*, (http://www.icbl.org/prelease/1998/aug7.html), August 1987. Accessed 29 October 2000.

Wareham, Mary. *Fact Sheet: Antipersonnel Landmine Stockpiles And Their Destruction*, (http://www.icbl.org/lm/1999/stockdestr.htm). Accessed 29 October 2000.

West, Togo D. West, Jr, and Dennis J. Reimer. *A Statement on the Posture of the United States Army Fiscal Year 1998*, (http://www.army.mil/aps/98/), February 1997. Accessed 27 October 2000.

Monographs, Information Papers, Studies, and Interview

Carr, Dale A. *An Evaluation of the U.S. Policy on Anti-Personnel Landmines.* U.S. Army War College Strategic Research Project, ADA364457, 07 April 1999.

Chester, Kemp L. *Influence and Outcome: The Making of a US Policy on Anti-Personnel Landmines*. Master's Thesis, ADA364209, 1999.

Curry, Bruce H. *Conflict with Libya: Use of Military Force Against Terrorism.* Naval War College Student Thesis, ADA279369, 17 June 1994.

Department Of Defence Canberra (Australia). *Visits by Nuclear Powered Warships to Australian Ports.* ADA355700, 1998.

Dunn, Peter J. *Life After ANZUS*. U.S. Army War College Study Project, ADA233561, 25 March 19991.

International Committee of the Red Cross. *Anti-personnel Landmines – Friend or Foe.* Geneva, March 1996.

Jones, Jon N. *United States Army Operations Under the Ottawa Convention: Mine Warfare without Antipersonnel Landmines*. Command and General Staff College Master's Thesis, ADA367686, 23 August 1999.

Klemencic, John V. *United States Policy for Anti-Personnel Landmines*. U.S. Army War College Strategic Research Project, ADA345447, 12 January 1998.

Leonard, Kevin. *Key Logistics Issues from Kosovo, Can the United States Achieve Strategic Velocity*. U.S. Army War College Strategic Research Project, ADA377409, 07 April 2000.

Ottignon, David A. *Losing Anti-Personnel Landmines: An Economy of Force*. Naval War College Research Paper, ADA363214, 05 February 1999.

Schmidt, Rachel. *Moving U.S. Forces: Options for Strategic Mobility*. Washington, D.C.: Congress of the U.S., Congressional Budget Office (CBO) Study, 1997.

Spinelli, John. *Anti-Personnel Landmines (APL) Issues*. Information Paper for Commanding General, United States Army Europe, 25 September 1998.

Sprowls, Lance P. *Replacing the Anti-personnel Landmine in the Force Protection Role*. Naval War College Student Research Paper, ADA370723, 17 May 1999.

Supplee, Thomas. *Not Without Risk: Operational Analysis of a Landmine Ban*. Naval War College Paper, ADA349337, 13 February 1998.

Weddle, Kevin J. *The Ottawa Treaty and Coalition Warfare: An Unholy Alliance?* U.S. Army War College Strategic Research Paper, ADA363463, 01 April 1999.

Willie, John F. *The U.S. Strategic Mobility Posture – A Critical Factor to Support National Security Objectives.* U.S. Army War College Strategic Research Paper, ADA250038, 01 April 1992.

Pasvogel, Matt. Interview by author, 09 January 2001.

U.S. Army Field Manuals, and Joint Publications, Directives and Documents

Department of the Army, *FM 3.0 Operations (DRAG Edition).* Washington, D.C.: Government Printing Office, 15 June 2000

_____. FM 5-71-2 *Armored Task-Force Engineer Combat Operations.* Washington, D.C.: Government Printing Office, 1996

_____. *FM 5-100 Engineer Operations.* Washington, D.C.: Government Printing Office, 1996

_____. *FM 5-102 Countermobility*. Washington, D.C.: Government Printing Office, 1985

_____. *FM 71-1 Tank And Mechanized Infantry Company Team.* Washington, D.C.: Government Printing Office, 1998

_____. *FM 71-3 The Armored And Mechanized Infantry Brigade.* Washington, D.C.: Government Printing Office, 1996

Department of Defense. *JP 1-02 Department of Defense Dictionary of Military and Associated Terms*, Washington, D.C.: Government Printing Office, 23 March 1994 (as amended through 10 January 2000).

_____. *JP 3-0 Doctrine for Joint Operations*, Washington, D.C.: Government Printing Office, 01 February 1995

_____. *JP 3-08 Interagency Coordination During Joint Operations Volume 1*, (Washington, D.C.: Government Printing Office, 09 October 1996

_____. *JP 3-15 Joint Doctrine for Barriers, Obstacles and Mine Warfare*, Washington, D.C.: Government Printing Office, 24 February 1999

_____. *JP 3-35 Joint Deployment and Redeployment Operations*, Washington, D.C.: Government Printing Office, 07 September 1999

_____. *JP 4-01 Joint Doctrine for the Defense Transportation System*, Washington, D.C.: Government Printing Office, 17 June 1997

_____. *Joint Military Operations Historical Collection*, Washington, D.C.: Government Printing Office, 15 July 1997

United States European Command. *2000 Posture Statement*, 29 February 2000.

_____. *Command Arrangement Agreement Between Commander in Chief, United States Transportation Command and Commander in Chief, United States European Command*, 22 July 1998.

_____. *Directive Number 64-1 Transportation Policy and Management (Draft)*, 15 November 1999.